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ABSTRACT

A study was conducted to investigate a series of hypothesized cues used in recognizing aural stimuli (Nonsense syllable trigrams) by adapting to the oral mode an experimental technique used successfully in visual word recognition studies. Three classes of cues were studied: (1) a cue for position, (2) a cur for the of cues were studied: (1) a cue for position, (2) a cue for the unit of recognition, and (3) a reversal cue. A tape-recorded test was presented to kindergarten, first-grade, and second-grade subjects. Each subject was offered an opportunity to make a series of 30 auditory matches on the basis of five cues: (1) a consonant in the initial position, (2) a consonant followed by a vowel in the initial position, (3) a consonant in the final position, (4) a consonant preceded by a vowel in the final position, and (5) a reversal. It was found that: (1) Children in visually discriminating between two similar looking words of one syllable tend to use the initial grapheme; (2) In aurally discriminating between two similar sounding one-syllable words, children tend to use the final segment or rhyme; (3) The first unit of recognition used visually is the single letter segment; and (4) The unit of recognition used aurally is a two phoneme segment made up of a vowel and consonant combination. (CK)

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CUES ASSOCIATED WITH RECOGNITION OF AURAL STIMULI IN THE PRIMARY GRADES

Janet B. Kuenne and Joanna P. Williams

When primary grade children are confronted with similar sounding words, how do they discriminate between them? Reading teachers and clinicians are in substantial agreement that auditory discrimination skills constitute important factors in the child's initial success in learning to read. These skills also contribute to the child's language development, an important factor in his meeting with continuing success in reading tasks. We can determine fairly easily whether children are able to hear likenesses and differences in words. However, we have relatively little empirical data concerning how children make auditory discriminations in the absence of such specific directions as "listen to the beginning of the word; or, listen to the end of the word; or, listen for the rhyming part of the word."

The purpose of the present study was to investigate a series of hypothesized cues used in recognizing aural stimuli (nonsense syllable trigrams) by adapting to the aural mode an experimental technique used successfully in visual word recognition studies. (see, e.g. Marchbanks & Levin, 1965; Williams, Blumberg & Williams, 1970) Three classes of cues were studied: (1) a cue for position, (the beginning versus the end of the word); (2) a cue for the unit of recognition (a single consonant segment versus a CV or VC segment); and (3) a reversal cue in which the word is heard with the initial and final CV segments reversed.

The tape-recorded test was presented to 38 kindergarten, 47 first-grade and 48 second-grade subjects who had a level of auditory discrimination ability not more than one year below their grade placement. Each subject was offered an opportunity to make a series of thirty auditory matches on the basis of five cues: 1) a consonant in the initial position (initial C segment); 2) a consonant followed by a vowel in the initial position (CV segment); 3) a consonant in the final position (final C segment); 4) a consonant preceded by a vowel in the final position (VC segment); and 5) a reversal.

A pseudoword stimulus was heard first, followed by three pseudoword response items. Each of these response items was a transformation of the stimulus item and was so designed as to contain a segment identical to one portion of the stimulus item. These identical segments embodied the cues. The experimental task for each of the 30 trials was to select the response item which the subject decided made a pair with the stimulus word. In a pretraining procedure, also standardized on tape, a technique for associating the stimulus items and corresponding response items with wooden blocks was developed individually with each subject. The subject

indicated his responses by lifting the two blocks that represented words making a "pair".

The order of preferred auditory cue choices among the five cues was the same for non-reading kindergarten subjects as for the readers in first and second grade: (1) final VC segment, (2) initial CV segment, (3) initial C segment, (4) reversal, and (5) final C segment. The data were analyzed using the Friedman analysis of variance and the Nemenyi test for a posteriori comparisons. The pattern of auditory cue choices resulting from these analyses was characterized by the following factors:

(1) a statistically significant preference at all grade levels for the CV or VC segment as the unit of recognition rather than the C segment;

(2) a marked tendency to use the final VC segment or rhyme;

(3) more selections by kindergarteners than by first and second graders of the reversal cue, but not at the .05 level of significance;

(4) a developmental and sex difference in the grades tested. (The strategy of the first-grade boys was similar to the "less mature" behavior of both sexes in kindergarten whereas first-grade girls employed a strategy of cue choice like that of the "more mature" subjects of both sexes in the second grade.)

The importance of this study lies in two contrasts it reveals concerning children's uses of auditory recognition cues versus visual recognition cues. First, children in visually discriminating between two similar looking words of one syllable tend to use the initial grapheme; in aurally discriminating between two similar sounding one-syllable words, children tend to use the final segment or rhyme. Second, the unit of recognition used visually is the single letter segment whereas the unit of recognition used aurally is a two phoneme segment made up of a vowel and consonant combination.

Do our techniques of reading instruction, both in the classroom and the clinic, reflect this contrast? Phonics approaches seem often to be based on an assumption of a one-to-one relationship between the aurally perceived phoneme and the visually perceived grapheme. Reading has been characterized as requiring an ability to integrate stimuli from the aural and visual modes (Birch & Belmont, 1964). If success in learning to read is related to such an integration, it seems important to recognize that the aural and visual units may not correspond on such an assumed one-to-one basis. Moreover, coding based on a rhyming sound (aural) may be contrasted with coding based on the initial letter (visual). Although such a contrast may not interfere with most children's ability to learn grapheme-phoneme correspondences it may be the source of reading difficulty for some.

NOTES

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